

mens bearing old fruiting inflorescences, and in no instance do they appear to have been destroyed by disease or fire. Other observers who have had the opportunity to study them during their entire stage of reproduction, assert that the plants show signs of decay with the maturing of their fruits and soon afterward die. It would undoubtedly afford an interesting subject for investigation to ascertain the age the various species of *Spathelia* reach before producing their flowers and fruits. Definite information upon this subject appears to be lacking.

Descriptions of each of the foregoing species will be found in North American Flora 25: 206-208. 1911.

NEW YORK BOTANICAL GARDEN.

SHORTER NOTES

NEW NAMES IN ILEX

✓ *Ilex kingiana* n. n.; *Ilex insignis* Hook. f., Fl. Brit. Ind. I, 599 (1872); not *I. insignis* Heer, Fl. Foss. Alask. 37, pl. x (1869).

✓ *Ilex microphyllina* n. n.; *Ilex microphylla* Newby. Proc. U. S. Nat. Mus. 5: 510 (1883); not *I. microphylla* Hook. Ic. Pl. or Spreng. D. C. Prod. 2: 12.

Salix fastwoodiae in the new edition of Heller's Catalogue, p. 89, is of course a misprint for *S. Eastwoodiae*, as its position in the list shows. It is *S. californica* Bebb. (not Lesq.).

T. D. A. COCKERELL

REVIEWS

Alexander's Outline Key of Michigan Sunflowers*

The utter impossibility of fitting the sunflowers of southeastern Michigan into the specific limits of sunflowers as given in the manuals, has led Mr. Alexander, of Detroit, to undertake the study of these plants. As the result of six years of study, he has worked out a system of classification of the perennial sunflowers, based upon the underground parts of the plants. He recognizes two main groups which he calls the STOREATAE, in which the roots and root-stocks are tangled together into a close

* Alexander, S. Outline Key of the Groups of the Genus *Helianthus* in Michigan. Report Mich. Acad. Science 13: 191-198. f. 1-5. 1911.

mat; and the SPARSAE, in which there is a shorter or longer underground root-stock (which he calls the "earth-branch"). In the first group, new plants arise from buds on this matted crown; the plants, therefore, all remain in a close cluster. In the other group, the new plants are scattered at some distance from the old plants. The STOREATAE are again subdivided into those in which the roots become very fleshy and usually more or less spindle-shaped toward the end of the season. The contents of these roots are used up by the following year's growth. The other division consists of those with fine fibrous roots. Further subdivisions of these are based upon the fact that the leaves are three-nerved in some, and pinnate-nerved in others. Still further subdivisions are based upon the hairiness. The group SPARSAE is divided into sections in which the underground stems are terminated by tubers (*H. tuberosus* being an example), and those not so enlarged. The latter are again divided into those with petiolate leaves and those with practically sessile leaf-blades. Further subdivisions are based upon the presence or absence of wings upon the petioles, and on the nervation of the leaf-blades.

The author finds that by subdividing the plants in this way, he can distinguish a large number of species which have apparently never been described. It is to be hoped that botanists elsewhere, where the perennial sunflowers are abundant, will try out Mr. Alexander's key as to its workability in other localities.

EAST LANSING, MICHIGAN

ERNST A. BESSEY

NEWS ITEMS

A hurricane accompanied by rain and snow on the night of November 11, at Lafayette, Ind., did much injury to the botanical department of the Purdue Experiment Station. The windows of the offices and laboratories were blown in, but the herbarium room escaped unharmed. About half of the glass in the conservatories was broken, and as the storm was followed by severe cold, practically all the plants perished. The collection included many species gathered from all parts of the country for culture hosts in the study of rusts.